



The Role of Remote Health Care System in Senior Citizen

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Abstract

From Chinese traditional point of view, family support is the recognition means among the elderly and children; the support of children to the elderly is the bounden duty of maintenance and obligations. However, with the evolving of social structures, industrial restructuring, urbanization, smaller families, family members shrinking and other factors, family pension as the main mode is constantly under attack, and its function have begun to weaken. Coupled with the supply of lack of social services to the senior citizen, making the growing problem of support of senior citizen. The intervention of remote health care system can both improve the efficiency of care, and greatly reduce the burden on the elderly themselves and their families, and it will play a more active role in senior citizen.

Key words: Remote health care system; Senior citizen; Socialization

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INTRODUCTION

Aging population is one of the social problems which exist in all over the world especially the developed countries, and

countries are looking for a better solution. And our country is a typical old before rich countries, which is facing the challenge of the aging population currently. Our country initially established the pension system of “three pillars” consisting of the basic endowment insurance, enterprise annuity and personal savings endowment, but it cannot cover all of the old man, also can’t solve all the problems in the elderly group, especially the problem of improving the quality of life for the elderly and their families. How to deal with the looming aging, enable the elderly to the old time, to spend their twilight years, need to build a new type of pension mode as a useful supplement for the existing pension mode in the aging society. In the care of old people, how to overcome the complexity and difficulty from the technical level to improve the efficiency of the care, so informatization and IT of care activities are indispensable. That remote supervision system for the elderly through the network use plays an important role, can yet be regarded as an effective nursing measure, and it will give immeasurable care in the elderly. So as to improve the quality of life of the elderly and their families, which has important practical significance in promoting economic development, the reasonable arrangement of again obtain employment, and construction of the socialist harmonious society.

1. CURRENT SITUATION OF CHINA’S AGING POPULATION AND THE APPLICATION OF REMOTE SUPERVISION SYSTEM

“The 21st century is the century of the elderly.” Our country is the most populous developing country in the world, and the number of elderly population aged 60 and above is also increasing year by year. By the end of 1998, the population aged 60 and above elderly has reached 124.45 million, and China has entered an aging society formally at the end of the 20th century. Entering the 21st century ushered our country into the rapid development phase of aging population. Aging population by an

average annual increase of 3.11 million added to an annual increase of 8 million. How to deal with the rapidly aging population problem, especially the pension problems have become a hot point of the concern of the whole society.

In our country, the remote supervision system has not been generally recognized by the whole society and the old, for the professional term of remote care most people are still watching on to observe its direction of the trend. Launched in April 2009, Gongshu district, Hangzhou city, the first to explore the "global eye" endowment service of science and technology of real-time remote nursing, which is free to install "global eye" video cameras for the elderly in the jurisdiction who is over 80 years old, low-income, needy and disabled, and presented CDMA mobile phones with functions of GPS global positioning and "one key" call function. The system combined the community service platform with Hangzhou 96345 convenient service platform on Internet and realized the remote nursing service for empty nesters 24 hours a day.

2. CONCEPT OF REMOTE SUPERVISION

Remote supervision is a new concept derived on the basis of telemedicine. The classified method of remote supervision in this area, such as names etc. are still not fully established, which are generally only divided into the remote medical and remote supervision, so it is less familiar. In the near future, it will become an new nursing service system in our aging society.

About remote care, most Chinese still lack of deep understanding of this concept. Distance refers to the distance to the related object in time and space. Care is to point to physically, mentally disabled, and having difficulty in engaging the daily life for the disadvantaged groups. In their daily life, such as dining, bathing and excretion behaviors, to give appropriate support and assistance. Based on that, the remote care has not been clearly defined. Through the definition of telemedicine and induction and summary of Japan's health ministry of the remote medical institute report, the author gives the remote supervision a outstanding definition. Remote supervision refers to the behaviors of using information communication equipment such as voice, data, image etc. information to conduct the two-way transmission and providing real-time, necessary care, support and health guidance for the people who are cared in different areas and different places. In remote areas, in other words, caregivers through the video communication to provide various care information for the people who are cared and give them support and help in mental and physical.

3. FUNCTION OF REMOTE SUPERVISION

Remote care is a kind of thinking method of solitary old man living in remote areas in the event of an hypothetical emergency, which can use instant information

communication equipment to catch the essence of the problem and take corresponding measures accurately and timely to help the difficult aged people out of crisis. It primarily offers proper care to family endowment and institution endowment and independent aid for the elderly in mental and physical as much as possible. Its purpose is to improve the quality of life of the elderly and their families. So, what's the role of remote nursing? What kind of form to exert its efficiency through? We can study through the following six aspects.

First, improve the efficiency of nursing. In the care of old people, especially for patients with Alzheimer's disease and bedridden patients, because we don't know when they appear abnormal behavior, so we should bound them for a long time and can't pull ourselves out. For caregivers, under this kind of condition, they don't have time to communicate with others, at the same time of deepening isolation, so they will have inevitable hopelessness of increasingly abnormal behavior of the elderly. Caregivers due to the long-term care of fatigue will have a negative influence on their psychology, and it is easy to encourage its abnormal behavior to occur. Conversely, the caregivers due to long-term fatigue causing the event of elder abuse are not in the minority. Based on this consideration, the important issue of the elderly family endowment is how to alleviate caregivers' long-term fatigue and tension. To reduce this kind of state, we must let the caregivers from heavy nursing work out to make their body and mind to be able to get free. So the solution is that the introduction of r emote supervision system is regarded as feasible and necessary. If the remote supervision system was introduced, the caregivers can get liberation from nursing labor and get to the whim of the moment of relatively free time to do other things, such as shopping, parting with friends, which is much helpful to alleviate fatigue status caused by care.

In addition, the risk of being ill to the elderly is generally higher, and most of the old, is suffering from a variety of chronic diseases. There is no doubt that let the old man go back and forth between medical institutions and pension agency will increase tremendous burden on them. From the old or the terminal-ill elderly's point of view, they hope to achieve professionally nursing staffs' door-to-door services, or 24-hour guardianship services in quiet places like their home, and that is their basic wish. However, at present this kind of human care has not been really implemented. If the remote supervision system has gained popularity, then for the ways and methods of elderly care will change dramatically.

Through settings of the remote supervision system, can greatly reduce the numbers of visit-nursing. The old blood pressure, heart rate, pulse, diet quantity data measured and input by caregivers, once-daily transmitted through the network to the appropriate physician, and physician according to the received data understand and master the health status of the elderly, and give appropriate instructions on appetite regulation and exercise method.

Also, the elderly can take advantage of the TV camera phone or camera, to have face-to-face communications with physicians, such not only can let the old people really feel that they can communicate with staff anytime and anywhere get their custody synchronously, but also increase the old people's sense of comfort and security. Transformation from human to collect the information of the original door (access) care means to using communication equipment to collect information of remote supervision system, not only reduces the door (visit) the number of care, but also greatly reduces the burden of caregivers.

In addition, another kind of effect is that information communication equipment manufacturers or hospital pharmacy can through the television telephone have conversations directly with the elderly and their families. Because the information communication equipment used by the elderly have more buttons and switches, general household telephone tip operation method is not only easy to get wrong, but difficult to achieve the desired effect. If you use the videophone, old people could follow the on-screen tips and methods for the operation of the equipment operation, simply and conveniently. Similarly when pharmacy drug usage and dosage, also using the same method can successfully solve the problem of the old man's drug. Because of that, it is easy to see that the establishment of the remote supervision system to improve the efficiency of care, reduce the burden of the elderly and their families is very important.

Second, it can eliminate the nursing gap between areas. Remote care is through the realization of network transmission technology, even in the village and township remote regions, remote island, with drawn, as long as you have a computer, television and telephone, mini cameras and other communication equipment, and operate according to nursing expert instructions, you can engage in nursing work and receive the necessary care. In China, like Yunnan, Gansu and other sparsely populated areas, these areas are constantly rising in the aging population, and the lack of nursing staff and pension institutions in number has brought a lot of problems to the elderly. In the area of absence of pension institutions and no professional caregivers, they even want to accept the door (access) care, day care, short-term in pension agency services, but too far away, the professional nursing staff can hardly provide the door-to-door service, nor daily return to the pension institution to accept the nursing service. Both of them are difficult to achieve. The old people coming to the degree of having to accept nursing care, they can only drag the disabled body, and pay higher transportation costs in big city to receive care in pension institutions.

China has a proverb, called "returning to their roots". The biggest ideal of old people aged seventy years is to live in the long living area with children, grandchildren to share the family and old age. But because its endowment (Nursing) problem is helpless, they are forced to leave their homes where they have lived for a long time, say goodbye

to the beloved family and friend, check into the pension institutions in big cities. Due to a sudden change of living environment and living habits, they feel lonely and helpless and cannot live comfortable, so in thought, speech and action they will be abnormal, if things go on like that, it will likely lead to dementia. After enter the elderly people, the biggest wish is to be visited and consoled by relatives and friends. That is to say, they want to return to the original, their own comfortable, tranquil life, so as to prevent the occurrence of senile dementia. If the remote care is established, old people no matter where all can accept from nursing expert instruction and assistance, even in remote islands and isolated rural old-age institutions where they have a less number of pension institutions, which is also an excellent link and the bridge to shrink the distance between remote care and old-age care institutions.

Third, it can reduce the cost of care. The elderly even reach the state of needing of care, we should let they continue to keep on living alone. To seek to maintain and restore the old people's physical and mental function as objectives, hospitals, clinics, elderly care health facilities and other institutions allow them to make the necessary physical therapy(therapy), occupational therapy and rehabilitation treatment and rehabilitation training. This method and the door (access) rehabilitation training also treat the improvement of exercise performance in elderly people and the impedance form recession in daily life movement as a target, and give them the function of training like gymnastics, walk and the creation of occupational therapy training like paintings, ceramics, calligraphy. In fact, the door (access), nursing home (access) rehabilitation training and rehabilitation training in medical, pension institutions, these nursing services must be provided by the human.

However, the use of television and telephone, vital sign sensor information communication equipment, if can be further promoted, it will replace the door(access) service, at a distance of the elderly, they can have the electrocardiogram, blood pressure, pulse, body weight and other data collection, this will greatly reduce the number of nursing home (access).

Through the application of image, voice transmission technology, medical personnel need not to visit the elderly, and the elderly also do not have to go hospitals, clinics, nursing home, and in their own homes they can be received rehabilitation training. This is not only the rational utilization of human resources, but also reduce the cost of nursing. In the islands, remote villages the elderly do not have to enter old-age care institutions in big cities, not only to save the expensive transportation costs, but also eliminates the fatigue by a long journey. In addition, also greatly reduced the time old people from the hospital, pension institutions required and the waiting time for treatment, but also reduces the time cost. The formation of remote health care system will have a huge effect on economy both for the caregivers and recipients.

Fourth, it can respond to emergencies. During the rapid development of the aging process in Chinese aging society, the number of elderly people living alone and empty nesters, are also increasing. In daily life, the old man once beat all dangerous situations; the majority is by virtue of their own strength to deal with. Every year old man died in the traffic accident, victimized by crime, burned by the fire, drowned at home in the bathtub, and falling off the stairs or building accidentally are not in the minority, and accidents and deaths occur frequently in the door and out of the door.

Risky events so frequent claimed the lives of the elderly, has formed a very unstable factor in the aging society. Beyond their living places but can save the elderly from the dangerous state of affairs, for the elderly, can eliminate their insecurities, also let them to feel at ease and live happily. Although there is distance, but they regard the remote care as a basic condition of each other to maintain regular contact. It will be an effective way to deal with an emergency.

Fifth, it can exchange. Things that the old people with the increase of age, the past close friends or acquaintances or life partner have passed away often happened. Not only that, old people has their own health condition also gone from bad to worse. Because of the loss of family, friends, and other factors affecting the recession the health status of their own, the old man had to suffer a double whammy mentally, physically. In order to create a healthy, self-reliance, no lonely living environment for old people and let them contact and communicate with family, friends, doctors, nurses at any time, it plays a very important role.

The remote care system by Internet information technology if gain popularity, with the remote care, support, communication and other contents abundance and implementation, not only can shorten the of distance between the elderly and the medical staff, but also let the body and mind of each part function declining or disturbed people communicate and dialogue with the medical staff for their condition easily and freely. In addition, by means of information communication the elderly living alone or in the pension institutions that need to be taken care of can communicate with distant relatives, friends and have other real-time communication through images and sound. Simultaneously, their safety confirmation and emergency notice is also able to realize.

Sixth, it can make the mobile care possible. With the development of information and communication technology and the popularization, using a mobile phone equipped with GPS, can quickly understand and master their location, can also receive map information quickly by the surrounding area. This function plays an important role in the remote care and assistance for the visually impaired elderly and out old man. If both the elderly with visual impairment and the nursing staff hold the television and telephone, the nurses can act as the old man's eyes. On the basis of understanding and grasping the place and

the surrounding map through GPS, kindly inform the old man where there are lights, where there are obstacles, how to cross the road. People with visual impairment can get nurses' considerate instruction by the headset indicator connecting to a mobile phone on, and feel at ease to travel. For the visually impaired old man and going-out old man, the use of remote health care system can make one person go out easily and without hesitation.

CONCLUSION

Now in the aging society, due to changes in family miniaturization and family relations, the traditional family pension has been difficult to continue to rely on their children. This is the current situation we have to face and cannot escape. In the past the interpersonal relationship we expect in the area began to become weak, and it is difficult to make up for. If remote health care system spread, these problems can be solved effectively. This is a real problem for who is bearing the burden and pressure of family pension and is about to face the family pension challenges of our generation.

REFERENCES

- WHO. (2005, December 1). The health for all policy framework for the WHO European region. Retrieved from <http://www.euro.who.int/informationSources/Publications/Catalogue/20051201-1>
- Healthy People. (2008, June). Retrieved from <http://www.healthypeople.gov/about/whatis.htm>
- Jingye, P. (2006). United Kingdom national health care (NHS) to serve national. *Journal of General Medicine and Clinical Education*, 1.
- Yaping, C. (2001). Evolution of health resources in China and reflections. *Journal of South China University (Social Science Edition)*, 4.
- Shilin, D. (2009). Health fair implementation of legal thought: Analysis based on the context of health resource allocation. *Journal of Finance and Economy*, 5.
- Qian, W. (2006). Economic analysis of health resources allocation. *Journal of the Economic System*, 2.
- Xin, G. (2005). Towards a market-oriented management: The strategic choice of China's medical system reform. *Journal of Comparison of Economic and Social Systems*, 6.
- Liming Y. (2009). Yao Qiaoyan: Study on perfecting the basic medical and health service financing mechanisms. *Journal of Price Theory and Practice*, 4.
- Wenli, L. Study on health human resource allocation. *Journal of Foreign Medical Sciences (Section of Hospital Management)*, 1.
- Li, L. (2006). Review of study on government regulation of medical service market. *Journal of The industry Research*, 5.
- Dongbo, G. (2010). Economic analysis of the health care reform and people's livelihood. *Journal of Study on Finance*, 3.